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Animal study: long-term ritalin doesn't impact growth

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Chronic use of methylphenidate (Ritalin) in young monkeys has no significant effect on growth or the dopamine system, or the likelihood of becoming addicted to cocaine, according to a study published online July 18 in *Neuropsychopharmacology*.

(HealthDay) -- Chronic use of methylphenidate (Ritalin) in young monkeys has no significant effect on growth or the dopamine system, or the likelihood of becoming addicted to cocaine, according to a study published online July 18 in *Neuropsychopharmacology*.

Kathryn E. Gill, from the Wake Forest School of Medicine in Winston Salem, N.C., and colleagues treated 16 juvenile male rhesus monkeys (about 30 months old) daily with placebo or a sustained-release formulation of methylphenidate for a year, followed by a washout period of three to five months. The animals were then given the opportunity to

intravenously administer cocaine over several months.

The researchers found that chronic methylphenidate treatment had no effect on weight gain or other measures of growth. Imaging studies showed no difference on the binding availability of D2/D3 receptors and dopamine transporters, although, after washout, D2/D3 receptor availability did not continue to decline at the same rate as controls. Chronic methylphenidate treatment had no effect on the propensity to acquire cocaine, overall response rates, or cocaine intake.

"In an animal model that closely mimics human development, chronic treatment with therapeutic doses of sustained-release methylphenidate did not have a significant influence on the regulation of dopamine transporters or D2/D3 receptors, or on standard measures of growth," Gill and colleagues conclude. "Furthermore, this treatment regimen and subsequent drug washout did not have an impact on vulnerability to cocaine abuse."

One author disclosed financial ties to pharmaceutical companies, including UCB Inc., which provided the methylphenidate.

More information: Abstract
Full Text (subscription or payment may be required)